

Radioactive Contamination Surveys



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USAMSC-K RSO

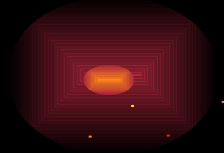
Radioactive Contamination Surveys



- Required by Nuclear Regulatory Commission (NRC) Material License, ARA and 10 CFR
- Proves the effectiveness of the organization's Radiation Safety Program's contamination control
- To protect the worker, public and environment

When Are Surveys Performed?

- Required:
 1. Quarterly, Monthly
 2. Shipments
 3. Disestablishing a RAM storage site
- Prior to receiving or forwarding RAM
- Incident response and recovery
- Whenever contamination is suspected



Preparing to survey



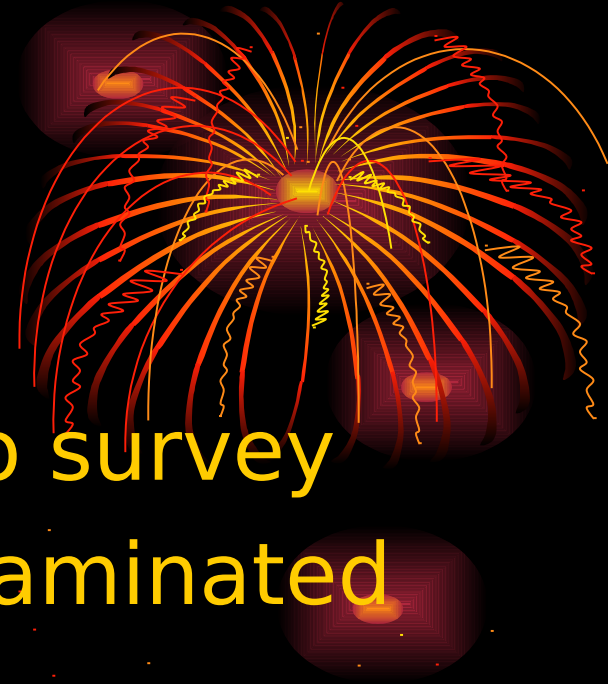
- Know what you are surveying for
- Collect enough survey material to complete the job
- Review previous surveys
- Know the area to survey

Survey Materials

- Metrical smears and sample bottles for Tritium (H3) and Nickel 63 (Ni63)
- Nucon smears for all other radionuclides
- Gloves
- Plastic bags
- Marking pen
- Survey maps



Performing survey



- Best practice is to use two to survey
- Survey least suspected contaminated area to most suspected area
- Survey high traffic areas and frequently handled items
- Survey suspect items and areas

Performing Survey (cont)

- Wear gloves
- Smear approximately 100 cm² (4"x4")
- Record smear location
- Smear doors knobs, light switches, storage shelves, work spaces, floor, packages, cabinet handles, etc.
- Change gloves



Performing Survey (cont)

- Place survey samples in plastic bag and write date, location, name of surveyor and phone number on bag
- Place used gloves in plastic bag to await survey results
- Fill out Nucleonics Lab Analysis Request form



Performing Survey (cont)

- Attach the sample bag, survey sheet and analysis request form together
- Forward to Nucleoncis Lab for processing
- Review survey results upon receipt
- File completed survey package
- Dispose of gloves based on survey results



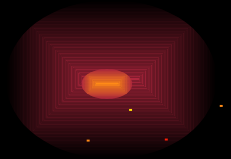
Reviewing Survey Results



- Review lab analysis for activity levels for each smear
- For any levels exceeding established limits contact your supervisor and the RSO
- Complete the Survey Form by filling in the activity from the lab analysis report

Reviewing Survey Results

(Continued)



- The Survey Map is a legal document
- File Survey Package for future reference and historical data

CONTAMINATION SURVEY MAP

Location: Room 400 Bldg 7250		Date: 5-Jun-05	
Division: Dept. Maintenance Services		Time: 0945 hrs	
Surveyor's Name: John Doe		LMSO: John Smith	
Signature: [Signature]		Phone: 754-5550	
Email: JDOE@... Phone: 704-5550		Scope: <input type="checkbox"/> Monthly <input type="checkbox"/> Transportation <input type="checkbox"/> Quarterly <input type="checkbox"/> Incident <input type="checkbox"/> Other (specify in comments)	
Room/Area: Room 400		Sample: H (H2O) N (N2O) A (AM241) T (Th232) C (Other, specify)	
		Activity: 100 cm ²	Location/Area: Decayed
		1	light switch
		2	ceiling top
		3	ceiling top
		4	ceiling top
		5	ceiling top
		6	left shelf
		7	right shelf
		8	floor
		9	floor
		10	floor top
		11	
		12	
		13	
		14	
		15	
		16	
		17	
		18	
		19	
20			



Sample of
Survey
Map

Nucleonics Lab Analysis Request Form

WIPE TEST ANALYSIS REQUEST FORM

(1) FROM: Unit Name _____ (2) TO: Director, U.S. Army TMDE Region Pacific
Unit Address _____ ATTN: ABISAM-TMDE-PK-N
Nucleonics Laboratory
UNIT 15378
APO AP 96350-8378
Phone: DSN 765-7008 FAX 765-8807

(3) POC	Name of Person Responsible	(4) PHONE:	DSN XXX-XXXX
(5) E-MAIL:			XXXX@XXXXXX
Alternate POC E-mail address:			XXXX@XXXXXX
(6) RSO:	Unit Radiation Safety Officer	(7) PHONE:	DSN XXX-XXXX
(8) E-MAIL:			XXXX@XXXXXX
Alternate RSO E-mail address:			XXXX@XXXXXX
(9) WIFE PERFORMED BY:	The Surgeon	(10) DATE:	XX/XX/XXXX
(11) E-MAIL:			XXXX@XXXXXX
(12) COMMANDER:	Unit Commander's Name and Rank	(13) PHONE:	DSN XXX-XXXX

(14) E-MAIL:	
(15) WIFE	(16) DESCRIPTION OF WIFE
1.	light switch
2.	wire tag
3.	counter tag
4.	counter tag
5.	counter tag
6.	left shelf
7.	right shelf
8.	floor
9.	floor
10.	floor tag
(17) WIFE TYPE (INSERT LETTER IN BLOCK 16)	
(1) INCIDENT	(18) COLLIMODULE REPLACEMENT
(2) TRANSPORTATION	(19) OTHER (PLEASE SPECIFY IN BLOCK 16)
(3) AREA SURVEY	
(4) COLLIMODULE REINSTALLATION	
(20) PERFORMING UNIT CODAAC	(21) OWNING UNIT CODAAC

Revised September 2004

This form is for use when collecting debris in TMDE Region Pacific Lab only

Samples will be rejected if Request Form is not properly filled out.

Form and Instructions can be obtained in Outlook Public Folders, All Public Folders, Korea Public Folders, Unit Folders, TMDE,

05 MAY 05
BKD 512
JOHN DOE
765-9999

U.S. ARMY TACELAB ANALYSIS REQUEST FORM

(2) TO: Director, U.S. Army TACELAB Region Pacific
ATTN: ANALYSIS REQUEST
Nucleonics Laboratory
UNIT 15376
APO, AP 96290-5076
Phone: DSN 755-1538 FAX 755-8841

(4) PHONE: DSN XXX-XXXX
XXXX@XXXXXX
XXXX@XXXXXX

(7) PHONE: DSN XXX-XXXX
XXXX@XXXXXX
XXXX@XXXXXX

ANALYZED BY: The Surveyor DATE: XXXX/XXXX/XXXX

TYPE MAIL: XXXX/XXXX/XXXX

(12) COMMANDER Unit Commander's Name and Rank (13) PHONE: DSN XXX-XXXX

(14) R. MAIL (15) WIPE	(16) DESCRIPTION OF WIPE	(17) ISOTOPES	(18) TYPE OF WIPE (SEE BLOCK 15)
1	light switch	Am 241/Tb 232	A
2	radio set top	Am 241/Tb 232	A
3	counter top	Am 241/Tb 232	A
4	counter top	H 3/Tb 83	A
5	counter top	Am 241/Tb 232	A
6	left shelf	Am 241/Tb 232	A
7	right shelf	Am 241/Tb 232	A
8	floor	Am 241/Tb 232	A
9	floor	Am 241/Tb 232	A
10	trash bin	Am 241/Tb 232	A

(19) WIPE TYPE (INSERT LETTER IN BLOCK 18)

(20) INCIDENT
(21) TRANSPORTATION
(22) AREA SURVEY
(23) CELL/MODULE REINSTALLATION

(24) CELL/MODULE REPLACEMENT
(25) OTHER (PLEASE SPECIFY IN BLOCK 18)

(26) PERFORMING UNIT DODGAG

(27) OWNING UNIT DODGAG

This form for use when submitting. Attach to TACELAB Region Pacific Lab only.

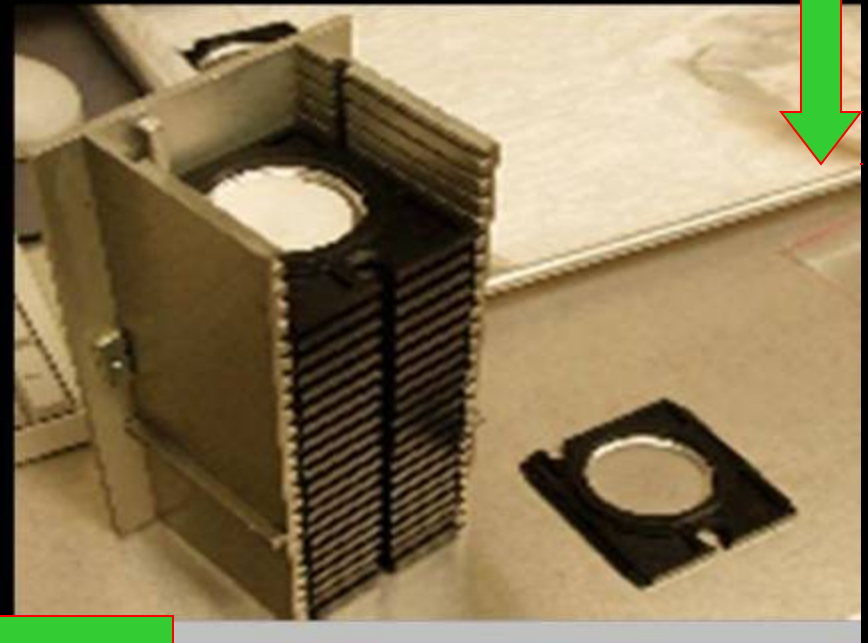
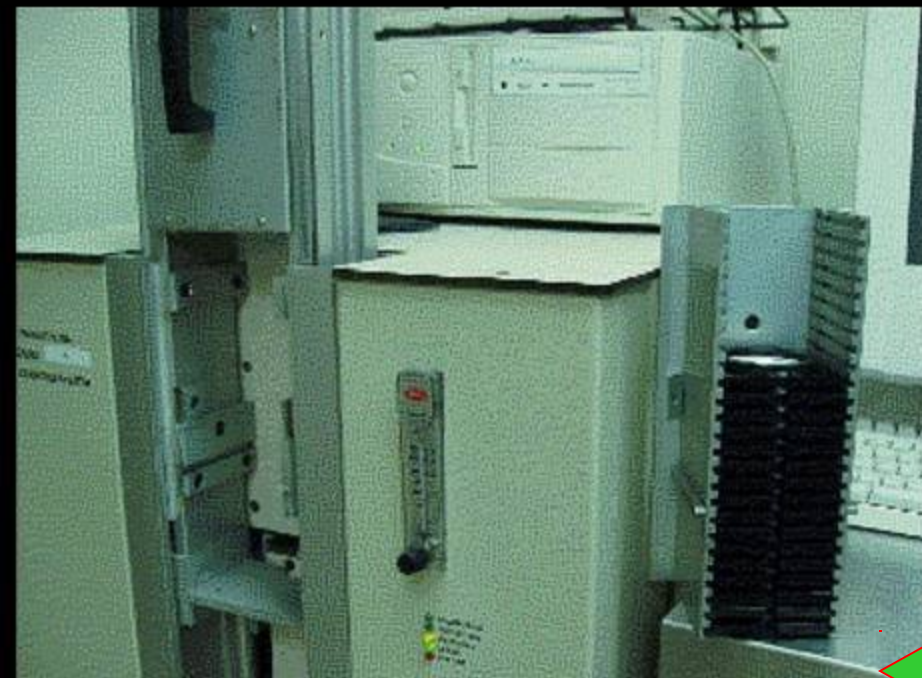
Survey Package sent to Nucleoni CS

- Samples
- Lab Request

Processing for Tritium and Nickel



Processing Nucon Smears



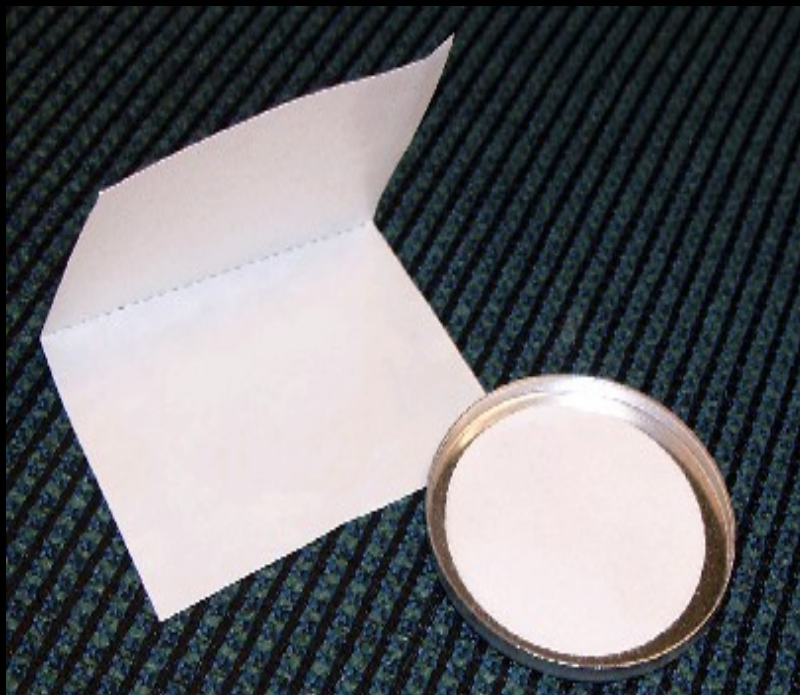
DO NOT



Turn in nucon
smears with
excess material
on them

This could result in a false
positive

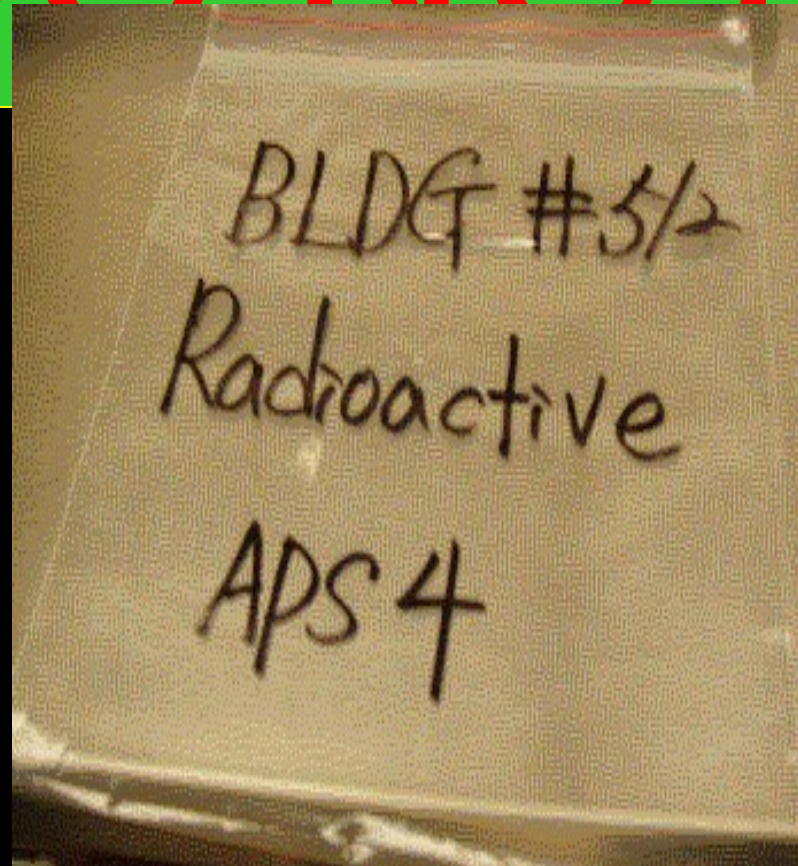
DO NOT



- Separate envelope and smear
- Place Nucon smear on planchet

NUCLEONICS WILL PREP SAMPLE FOR PROCESSING

DO NOT



on sample

“OACTIVE”

Survey smears are not required to be marked as RAM

DO NOT



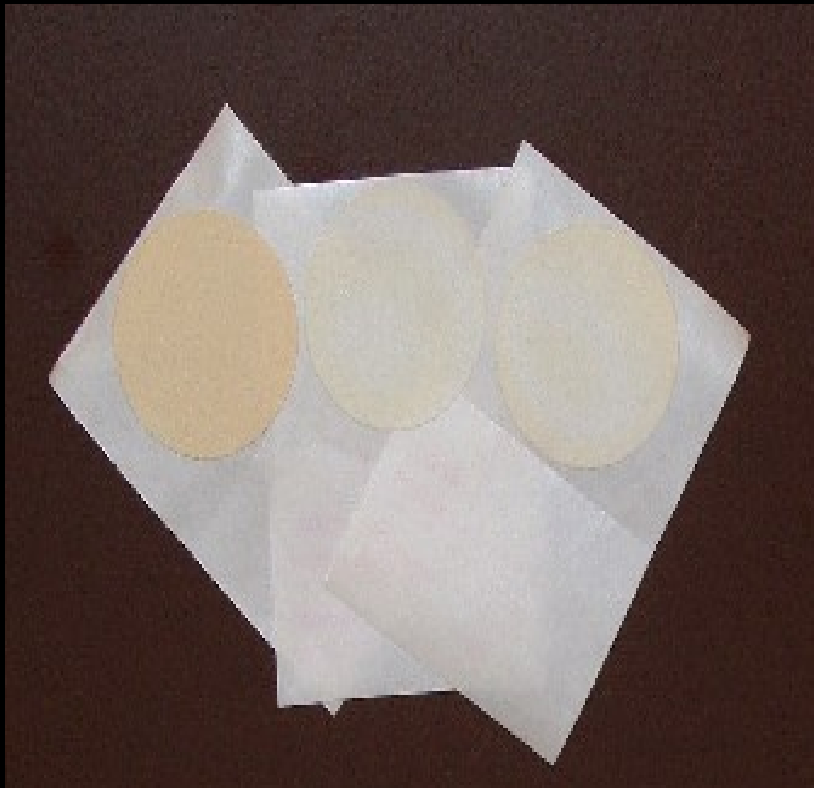
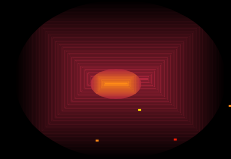
Write on the side of
sample bottle

Collect excess dirt in
sample bottle

Label cap too big

Dirt & Markings on side of bottle can
cause a false positive result

DO NOT



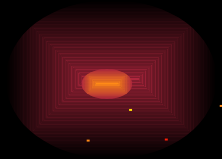
Use old or
discolored
smears
(mertrigel or
nucon)

The discolor will result in false
positive

Radioactive Contamination Surveys



Radioactive contamination can not be detected or measured by our senses.



Radioactive Contamination can only be detected and measured by surveys.

Follow the proper guidelines for surveying to ensure an effective and compliant control program.

**CONTACT YOUR RSO FOR
GUIDANCE**